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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/497,774	02/03/2000	Edith H. Stern	BC9-99-059	7893

23334 7590 06/04/2004

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EXAMINER

LAFORGIA, CHRISTIAN A

ART UNIT PAPER NUMBER

2131

DATE MAILED: 06/04/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/497,774

Applicant(s)

STERN ET AL.

Examiner

Christian La Forgia

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
 - If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
 - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
 - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 March 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-48 is/are pending in the application.
- 4a) Of the above claim(s) 15, 16, 20 and 42-46 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-14, 17-19, 21-41, 47 and 48 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: _____

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DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 17 March 2004 has been entered.

2. Claims 1-48 are presented for examination.

3. Claims 15, 16, 20, and 42-46 have been cancelled as per Applicant's request.

Response to Arguments

4. Applicant's arguments with respect to claims 1-14, 14-19, 21-41, 47, and 48 have been considered but are moot in view of the new ground(s) of rejection.

5. See further rejections that follow.

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

7. Claims 25 and 47 are rejected under 35 U.S.C. 102(e) as being anticipated by U.S. Patent No. 6,728,775 to Chaddha, hereinafter Chaddha.

8. As per claim 25, Chaddha teaches a system comprising:

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a server for transmitting user requested data in a data flow for reception by a plurality of users requesting said data at substantially the same time (Figures 9 [block 910], 10 [block 1010], 11 [block 1110], 12 [block 1210]; column 2, lines 26-33; column 4, lines 50-67; column 6, lines 28-65; column 8, lines 55-67; column 9, lines 16-21);

the server having means for connecting the server to a telecommunications network for the transmission of data (Figure 8 [block 816]; column 6, lines 21-28); and

the server including means for responding to user requests for data, said user requests being received from the telecommunications network, for identifying the individual requesters as the source of respective user requests for data and arranging the individual requesters in respective groups for receiving said user requested data in a data stream (Figures 2 [block 210], 8 [block 210], 9 [block 920], 10 [block 1020], 11 [block 1130], 12 [block 1230]; column 2, lines 26-33; column 4, lines 50-67; column 6, lines 28-65; column 8, lines 55-67; column 9, lines 16-21), and

wherein said respective groups arranging said individual requesters for reception of said user requested data in said respective data stream corresponding to a point of transmission of said data flow by time of request or by number of requests, for transmission of the same user requested data in said respective data stream to the respective users in respective groups, and distributing the user load on said server and shifting said user load toward a steady state load on the server by distributing said respective groups over the transmission of said data flow by time of data stream transmission or by place in said data flow transmission (column 7, lines 14-50).

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9. As per claim 47, Chaddha teaches a computer program product for use in operating a computer, the computer program product including computer instructions comprising instructions for:

receiving requests for data from users, said data being organized for transmission in a data flow from a data store (Figures 2 [block 210], 8 [block 210], 9 [block 920], 10 [block 1020], 11 [block 1130], 12 [block 1230]; column 2, lines 26-33; column 4, lines 50-67; column 6, lines 28-65; column 8, lines 55-67; column 9, lines 16-21);

arranging the users in groups, wherein each of said groups corresponding to reception of user requested data in a data stream at a point of said data flow (column 7, lines 14-50); and

responsive to the users' requests, sending said user requested data in at least one data stream from the data store to the groups with the groups receiving separate respective portions of the data relatively displaced in time (Figures 9 [block 910], 10 [block 1010], 11 [block 1110], 12 [block 1210]; column 2, lines 26-33; column 4, lines 50-67; column 6, lines 28-65; column 8, lines 55-67; column 9, lines 16-21), and

wherein the time in the transmission of said data stream said user is receiving said transmission (column 4, lines 58-67).

Claim Rejections - 35 USC § 103

10. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

11. Claims 1-14, 17-24, 26-41, and 48 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chaddha in view of U.S. Patent No. 6,704,790 to Gopalakrishnan, hereinafter Gopalakrishnan.

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12. As per claim 1, Chaddha teaches a system for transmitting data in a data stream to grouped recipients, comprising:

a server, for receiving users' requests for transmission of user requested data in a data flow for reception by said users (Figures 2 [block 210], 8 [block 210], 9 [block 920], 10 [block 1020], 11 [block 1130], 12 [block 1230]; column 2, lines 26-33; column 4, lines 50-67; column 6, lines 28-65; column 8, lines 55-67; column 9, lines 16-21);

the server for transmission of at least one data stream, and responsive to the users' requests for arranging the users in at least one group of recipients of a respective data stream of the at least one data stream, with each user being arranged in a respective group of the at least one group, and wherein each respective group for receiving said user requested data in said respective data stream corresponding to a point of transmission of said data flow (column 6, line 66 to column 7, line 50); and

the server, responsive to the arrangement of the users in said at least one group, for transmitting said user requested data in said respective data stream to each said respective group (column 7, lines 13-50).

13. Chaddha does not teach wherein the server for realigning a respective user from a first respective group corresponding to receiving user requested data at a first location in the respective data stream to a second respective group corresponding to receiving user requested data at a second location in the data stream, the second location being selected by the server to change the location in the data stream the respective user is receiving user requested data to any location in the data stream other than the first location in the data stream.

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14. Gopalakrishnan discloses wherein the server for realigning a respective user from a first respective group corresponding to receiving user requested data at a first location in the respective data stream to a second respective group corresponding to receiving user requested data at a second location in the data stream, the second location being selected by the server to change the location in the data stream the respective user is receiving user requested data to any location in the data stream other than the first location in the data stream (column 2, line 64 to column 3, line 5; column 6, line 53 to column 7, line 43). It would have been obvious to one of ordinary skill in the art at the time the invention was made to have the server switch between the data streams, since Gopalakrishnan states at column 2, lines 7-18 that such a modification would allow for a smoother and quicker transition between data streams.

15. Regarding claims 2 and 37, Gopalakrishnan teaches wherein, the server realigns a respective user with said respective data stream to change the relative position of the respective user to the data being transmitted in said respective data stream, responsive to a signal from the respective user (column 7, lines 8-35).

16. Regarding claims 3, 26, and 38, Chaddha teaches wherein, the server arranges the users into the groups arranged by the size of the group (column 7, lines 33-50).

17. Regarding claims 4, 27, and 39, Chaddha teaches wherein, the server arranges the users into the groups arranged by a time interval for assembling the group (column 7, lines 33-50).

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18. Regarding claims 5, 28, and 34, Chaddha and Gopalakrishnan do not teach wherein, the server is limited to a maximum number of the groups; and wherein said server arranges the groups in relation to the maximum number. It would have been obvious to one of ordinary skill in the art at the time the invention was made to limit the server to a maximum number of groups, since Chaddha suggests at column 7, lines 46-50 optimizing data transfer rates by reducing network congestion and packet losses which would occur by limiting the number of groups. It would have been obvious to one of ordinary skill in the art at the time the invention was made to arrange the groups in relation to maximum number, since it would be aesthetically pleasing to view the groups from a highest to lowest or lowest to highest fashion. See MPEP 2144.04; see *In re Seid*, 161 F.2d 229, 231, 73 USPQ 431, 433 (CCPA 1947).

19. Regarding claims 6, 29, and 35, Chaddha teaches wherein, the telecommunications medium is the Internet (Figure 2 [block 220], 8 [block 220]).

20. Regarding claims 7, 30, and 36, Gopalakrishnan teaches the user's requests are received from a World Wide Web browser (column 6, lines 23-33).

21. Regarding claims 8 and 40, Gopalakrishnan teaches wherein, the data is transmitted with identifiable locations in the data stream (column 8, line 31 to column 9, line 22);

the server identifying a respective identifiable location in the data stream corresponding to the request (column 8, line 31 to column 9, line 22); and

the server, moving the respective user to another of the groups receiving the data stream from another location in the data stream related to the respective identifiable location (column 6, line 53 to column 7, line 35).

22. With regards to claim 9, Chaddha teaches wherein, the related location is advanced in time of transmission of the data stream relative to the respective identifiable location (Abstract; column 4, lines 58-67).

23. Concerning claim 10, Chaddha teaches wherein, the related location is delayed in time of transmission of the data stream, relative to the respective identifiable location (Abstract; column 4, lines 58-67).

24. With regards to claim 11, neither Chaddha nor Gopalakrishnan disclose wherein, the server has a plurality of ports and with each the group connected to a respective port for receiving the data stream from separate respective locations in the data stream through a respective port; and the server, moving the user to a the separate respective location in the data stream by reconnecting the user to another of the respective ports. Chaddha and Gopalakrishnan both disclose the use of servers. It is well-known in the art that servers communicate with clients via ports, or sockets. In the case of multicasting to different multicasting groups or addresses, one of ordinary skill in the art would know that each group would communicate with the server via a different port. Therefore, if a client wishes to switch from one group to another, it would have to switch the port that was connected to the server in order to successfully change groups.

25. Regarding claim 12, Chaddha and Gopalakrishnan do not teach wherein, the server has a plurality of respective ports; and, the server is connected to users and the groups through separate respective ports; the server realigning a respective user with the data stream to change the time in the transmission of the data stream the user is receiving the transmission, by reconnecting the user to another of the respective ports. Chaddha and Gopalakrishnan both disclose the use of servers. It is well-known in the art that servers communicate with clients via ports, or sockets. In the case of multicasting to different multicasting groups or addresses, one of ordinary skill in the art would know that each group would communicate with the server via a different port. Therefore, if a client wishes to switch from one group to another, it would have to switch the port that was connected to the server in order to successfully change groups.

26. Regarding claim 13, Chaddha and Gopalakrishnan do not teach wherein, the respective ports have a plurality of respective sockets and the users are connected to respective sockets; the server has a plurality of pointers into separate respective locations in the data store associated with respective sockets, for sending data from the separate respective locations in the data store to the respective sockets and to the respective users associated with the respective sockets; and the server realigning a respective user with the data stream to change the time in the transmission in the data stream, the user is receiving the data, by reconnecting the respective user to another respective socket connected to another respective pointer. Chaddha and Gopalakrishnan both disclose the use of servers. It is well-known in the art that servers communicate with clients via sockets. In the case of multicasting to different multicasting groups or addresses, one of ordinary

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skill in the art would know that each group would communicate with the server via a different socket. Therefore, if a client wishes to switch from one group to another, it would have to switch the socket that was connected to the server in order to successfully change groups.

27. Regarding claim 14, Chaddha and Gopalakrishnan do not teach wherein the ports have a plurality of respective sockets and the respective users are connected to respective sockets; the server has a plurality of pointers, into separate respective locations in the data store, connected with respective sockets, for sending data from the separate respective locations in the data store to the respective sockets and the respective users connected to the respective sockets; and the server realigning a respective user with the data stream to change the time in the transmission in the data stream, the user is receiving the data, by moving the pointer for a respective socket to another location in the data store. Chaddha and Gopalakrishnan both disclose the use of servers. It is well-known in the art that servers communicate with clients via sockets. In the case of multicasting to different multicasting groups or addresses, one of ordinary skill in the art would know that each group would communicate with the server via a different socket. Therefore, if a client wishes to switch from one group to another, it would have to switch the socket that was connected to the server in order to successfully change groups.

28. Regarding claim 17, Chaddha teaches further comprising:

means for signaling connected to the users for sending discrete respective signals to the server (Figures 9 [block 920], 10 [block 1020], 12 [block 1230]; column 8, lines 55-67; column 9, lines 16-21).

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29. Chaddha does not teach the server, responsive to the discrete respective signals, realigning a respective user with the data stream to change the relative position of the respective user to the data being transmitted in the data stream; and wherein, the realignment is in discrete steps relative to position of the respective user to the data being transmitted in the data stream.

30. Gopalakrishnan discloses the server, responsive to the discrete respective signals, realigning a respective user with the data stream to change the relative position of the respective user to the data being transmitted in the data stream (column 2, line 64 to column 3, line 5; column 6, line 53 to column 7, line 43); and

wherein, the realignment is in discrete steps relative to position of the respective user to the data being transmitted in the data stream (column 2, line 64 to column 3, line 5; column 6, line 53 to column 7, line 43).

31. Regarding claim 18, Chaddha teaches wherein, the discrete respective signals include signals for advancing or retarding the realignment of the respective position of the respective user (column 8, lines 23-67).

32. Regarding claim 19, Chaddha teaches wherein, the discrete respective signals include signals for realignment in discrete intervals (column 8, lines 23-67).

33. Regarding claim 21, Chaddha teaches wherein the discrete intervals are intervals of space displacement in the location of the data in the data stream (Abstract; column 4, lines 58-67).

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34. Concerning claim 22, Gopalakrishnan teaches wherein, the server includes means for disconnecting a respective user with said respective data stream at an identifiable location in said respective data stream and for reconnecting the user to another data stream of the at least one data stream (column 6, line 53 to column 7, line 35; column 8, line 31 to column 9, line 21).

35. With regards to claim 23, Gopalakrishnan teaches wherein, the server includes means for disconnecting the respective user with another data stream after a discrete interval and reconnecting the user with the data stream at the identifiable location (column 6, line 53 to column 7, line 35; column 8, line 31 to column 9, line 21).

36. Concerning claim 24, Gopalakrishnan teaches wherein, the server means for reconnecting the user with the data stream is a pointer for accessing data in the data store at discrete locations (column 6, line 53 to column 7, line 35; column 8, line 31 to column 9, line 21).

37. With regards to claim 31, Chaddha does not teach wherein the server includes means for shifting the respective individual requesters between the groups to change the time of reception of said user requested data relative to the data stream transmission. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have the server change the group of an individual requester, since Chaddha discusses in column 7, lines 33-50 that such a modification would aid in optimizing transfer rates.

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38. With regards to claim 32, Chaddha teaches wherein, said user requested data is accessed from a data store communicatively coupled to the server (Figure 1 [block 110]; column 3, lines 36-50).

39. Chaddha does not disclose the server includes means for changing the location in the data store accessed for shifting the location of the user requested data relative to the data flow transmission.

40. Gopalakrishnan teaches the server includes means for changing the location in the data store accessed for shifting the location of the user requested data relative to the data flow transmission (column 8, line 46 to column 9, line 22).

41. As per claim 33, Chaddha teaches a method for transmitting data to users requesting the data, arranged in groups to receive the data, comprising the steps of:

receiving, at a server having a data store, user requests for transmission of user requested data in a data flow for reception by a plurality of users across a telecommunications medium (Figures 2 [block 210], 8 [block 210], 9 [block 920], 10 [block 1020], 11 [block 1130], 12 [block 1230]; column 2, lines 26-33; column 4, lines 50-67; column 6, lines 28-65; column 8, lines 55-67; column 9, lines 16-21);

responsive to said user requests, arranging said plurality of users in at least one group of recipients of said user requested data in said data flow with each user of the plurality of users being arranged in a respective group of said at least one group, and wherein each respective group for receiving said user requested data in a respective data stream corresponding to a point of transmission of said data flow (column 6, line 66 to column 7, line 50); and

responsive to said user requests, sending said user requested data in a respective data stream from the data store of the server to the telecommunications medium, wherein each said respective data stream being destined for reception by said respective group of recipients (column 7, lines 13-50).

42. Chaddha does not disclose realigning, at the server, a respective user from a first respective group corresponding to receiving user requested data at a first location in the respective data stream to a second respective group corresponding to receiving user requested data at a second location in the data stream, the second location being selected at the server to change the location in the data stream the respective user is receiving user requested data to any location in the data stream other than the first location in the data stream.

43. Gopalakrishnan teaches realigning, at the server, a respective user from a first respective group corresponding to receiving user requested data at a first location in the respective data stream to a second respective group corresponding to receiving user requested data at a second location in the data stream, the second location being selected at the server to change the location in the data stream the respective user is receiving user requested data to any location in the data stream other than the first location in the data stream (column 2, line 64 to column 3, line 5; column 6, line 53 to column 7, line 43). It would have been obvious to one of ordinary skill in the art at the time the invention was made to have the server switch between the data streams, since Gopalakrishnan states at column 2, lines 7-18 that such a modification would allow for a smoother and quicker transition between data streams.

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44. As per claim 41, Chaddha teaches a system for transmitting data in a data stream sent from a server to a plurality of users requesting access to the data stream at substantially the same time, a method comprising the steps of,

a plurality of users receiving user requested data in a data flow by receiving at least one data stream sent from a server (Abstract; column 2, lines 26-33; column 4, lines 58-67);

arranging said plurality of users into groups, comprising a first group and a second group, each of said groups for reception of a respective data stream transmitted from the server, each respective data stream corresponding to reception of user requested data at a point of transmission of said data flow (column 7, lines 13-50).

45. Chaddha does not teach responding, at the server, to a request from one of the plurality of users that is in said first group by moving the one of the plurality of users from said first group to said second group for reception, by said one of the plurality of users, of user requested data at a point of said data flow relatively displaced in space or time from reception by said first group.

46. Gopalakrishnan discloses responding, at the server, to a request from one of the plurality of users that is in said first group by moving the one of the plurality of users from said first group to said second group for reception, by said one of the plurality of users, of user requested data at a point of said data flow relatively displaced in space or time from reception by said first group (column 2, line 64 to column 3, line 5; column 6, line 53 to column 7, line 43). It would have been obvious to one of ordinary skill in the art at the time the invention was made to have the server switch between the data streams, since Gopalakrishnan states at column 2, lines 7-18 that such a modification would allow for a smoother and quicker transition between data streams.

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47. As per claim 48, Chaddha teaches a system for transmitting data in a data stream to grouped recipients, comprising:

a server, for receiving users' requests for transmission of user requested data in a data flow for reception by said users (Figures 2 [block 210], 8 [block 210], 9 [block 920], 10 [block 1020], 11 [block 1130], 12 [block 1230]; column 2, lines 26-33; column 4, lines 50-67; column 6, lines 28-65; column 8, lines 55-67; column 9, lines 16-21);

said server for transmission of at least one data stream, and, responsive to said users' requests, for arranging said users in at least one group of recipients of a respective data stream of the at least one data stream, with each user being arranged in a respective group of the at least one group, and wherein each respective group for receiving said user requested data in said respective data stream corresponding to a point of transmission of said data flow (column 6, line 66 to column 7, line 50).

48. Chaddha does not teach said server, responsive to the arrangement of said users in said at least one group, for transmitting said user requested data in said respective data stream to each said respective group, and wherein the server for realigning a respective user; from a first respective group corresponding to said respective user receiving user requested data being transmitted at a first location in the data flow at a first point in time; to a second respective group corresponding to said respective user receiving transmission of said user requested data being transmitted at the first location in the data flow at a second point in time, the second point in time being selected by the server to change the relative time the respective user is receiving the transmission of said user requested data being transmitted at the first location in the data flow.

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49. Gopalakrishnan discloses said server, responsive to the arrangement of said users in said at least one group, for transmitting said user requested data in said respective data stream to each said respective group, and wherein the server for realigning a respective user (column 2, line 64 to column 3, line 5; column 6, line 53 to column 7, line 43);

from a first respective group corresponding to said respective user receiving user requested data being transmitted at a first location in the data flow at a first point in time (column 2, line 64 to column 3, line 5; column 6, line 53 to column 7, line 43);

to a second respective group corresponding to said respective user receiving transmission of said user requested data being transmitted at the first location in the data flow at a second point in time, the second point in time being selected by the server to change the relative time the respective user is receiving the transmission of said user requested data being transmitted at the first location in the data flow (column 2, line 64 to column 3, line 5; column 6, line 53 to column 7, line 43). It would have been obvious to one of ordinary skill in the art at the time the invention was made to have the server switch between the data streams, since Gopalakrishnan states at column 2, lines 7-18 that such a modification would allow for a smoother and quicker transition between data streams.

Conclusion

50. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

51. The following patents are cited to further show the state of the art with respect to switching streams, such as:

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United States Patent No. 6,732,183 to Graham, which is cited to show video and streaming for multiple users.

United States Patent No. 6,564,262 to Chaddha, which is cited to show multiple multicasting of multimedia streams.

United States Patent No. 5,832,229 to Tomoda et al., which is cited to show a multicast communication system.


52. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christian La Forgia whose telephone number is (703) 305-7704. The examiner can normally be reached on Monday thru Thursday 7-5.

53. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ayaz Sheikh can be reached on (703) 305-9648. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

54. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Christian LaForgia
Patent Examiner
Art Unit 2131

clf


AYAZ SHEIKH
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100